1645

Docket No.: PF-0162-3 DIV

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By _____ Printed D. Ellis

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Goli et al.

Title: A NOVEL GLUTATHIONE S-TRANSFERASE

Serial No.: 09/784,739 Filing Date: February 14, 2001

Examiner: Hines, J.A. Group Art Unit: 1645

Mail Stop: PG Pub
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL FEE SHEET

Sir:

Transmitted herewith are the following for the above-identified application:

1. Return Receipt Postcard;
2. Request for Corrected Patent Application Publication (2 pp.);
3. Copy of Claims section (and first page) of Application publication (3 pp.); and
4. Copy of Claims section of Application, as originally filed (5 pp.).

The fee has been calculated as shown below.

X No additional Fee is required.

The Commissioner is hereby authorized to charge any additional fees required under 37 CFR 1.16 and 1.17, or credit overpayment to Deposit Account No. 09-0108. **A duplicate copy of this sheet is enclosed.**

Respectfully submitted,

INCYTE CORPORATION

Date: May 6, 2003

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27904

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REQUEST FOR CORRECTED PATENT APPLICATION PUBLICATION

Sir:

Attached is a copy of the Claims section (and first page) of published Application Serial No. 09/784,739 (with red-line markings to note changes), published by the United States Patent and Trademark Office (USPTO) on March 6, 2003. A corrected publication of the above-mentioned patent application is respectfully requested, as the errors are deemed material. Please make the correction as follows:

• In the section entitled "Claims", please insert the following information before Claim 8:

1. A purified polypeptide comprising an amino acid sequence selected from the group consisting of:

a) an amino acid sequence of SEQ ID NO:1,

b) a naturally-occurring amino acid sequence having at least 90% sequence identity to the sequence of SEQ ID NO:1,

c) a biologically-active fragment of the amino acid sequence of SEQ ID NO:1, and

d) an immunogenic fragment of the amino acid sequence of SEQ ID NO:1.

3. A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 2.

4. A cell transformed with a recombinant polynucleotide of claim 3.

5. A transgenic organism comprising a recombinant polynucleotide of claim 3.

6. A method for producing a polypeptide of claim 1, the method comprising:
   a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 1, and
   b) recovering the polypeptide so expressed.

7. An isolated antibody which specifically binds to a polypeptide of claim 1.

Applicants hereby request that the above corrections be entered based on the following enclosed documents:

1. A copy of the Claims (pages 55-59), as originally filed on February 14, 2001.

Applicants believe that no fee is due with this paper. However, if the Commissioner determines that a fee is necessary, the Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. **09-0108.**

Respectfully submitted,
INCYTE CORPORATION

Date: May 6, 2003

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US PATENT & TRADEMARK OFFICE

PATENT APPLICATION FULL TEXT AND IMAGE DATABASE

United States Patent Application **20030044401**
Kind Code **A1**
Goli, Surya K. ; et al. **March 6, 2003**

Novel glutathione s-transferase

Abstract

The present invention provides a human glutathione s-transferase (HGST) and polynucleotides which identify and encode HGST. The invention also provides genetically engineered expression vectors and host cells comprising the nucleic acid sequences encoding HGST and a method for producing HGST. The invention also provides for agonists, antibodies, or antagonists specifically binding HGST, and their use, in the prevention and treatment of cancer and other diseases associated with the expression of HGST. Additionally, the invention provides for the use of antisense molecules to polynucleotides encoding HGST for the treatment of cancer and other diseases associated with the expression of HGST. The invention also provides diagnostic assays which utilize the polynucleotide, or fragments or the complement thereof, and antibodies specifically binding HGST.

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Date: February 14, 2003

U.S. Current Class: **424/94.5**; 435/193; 435/6; 536/23.2
U.S. Class at Publication: **424/94.5**; 435/6; 536/23.2; 435/193
Intern'l Class: A61K 038/52; C12Q 001/68; C07H 021/04

Claims

[Please claim 7.]

8. An isolated polynucleotide comprising a sequence selected from the group consisting of: a) a polynucleotide sequence of SEQ ID NO: 2, b) a naturally-occurring polynucleotide sequence having at least 90% sequence identity to the sequence of SEQ ID NO: 2, c) a polynucleotide sequence complementary to a), d) a polynucleotide sequence complementary to b) and e) a ribonucleotide equivalent of a)-d).

9. An isolated polynucleotide comprising at least 60 contiguous nucleic acids of claim 8.

10. A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 8, the method comprising: a) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof, and b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

11. A method of claim 10, wherein the probe comprises at least 60 contiguous nucleotides.

12. A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 8, the method comprising: a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.

13. A composition comprising an effective amount of a polypeptide of claim 1 and an acceptable excipient.

14. A method for screening a compound for effectiveness as an agonist of a polypeptide of claim 1, the method comprising: a) exposing a sample comprising a polypeptide of claim 1 to a compound, and b) detecting agonist activity in the sample.

15. A method for screening a compound for effectiveness as an antagonist of a polypeptide of claim 1, the method comprising: a) exposing a sample comprising a polypeptide of claim 1 to a compound, and b) detecting antagonist activity in the sample.

16. A method for screening a compound for effectiveness in altering expression of a target polynucleotide, [illegible] the method

polynucleotide, and c) comparing the expression of the target polynucleotide [illegible] amounts of the compound and in the absence of the compound.

17. A method for assessing toxicity of a test compound, said method comprising: a) treating a biological sample containing nucleic acids with the test compound; b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of a polynucleotide of claim 8 under conditions whereby a specific hybridization complex is formed between said probe and a target polynucleotide in the biological sample, said target polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 8 or fragment thereof; c) quantifying the amount of hybridization complex; and d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.

18. A method for treating a disease or condition associated with decreased expression of functional HGST, comprising administering to a patient in need of such treatment the composition of claim 13.

19. A composition comprising an agonist compound identified by a method of claim 14 and a pharmaceutically acceptable excipient.

20. A method for treating a disease or condition associated with decreased expression of functional HGST, comprising administering to a patient in need of such treatment a composition of claim 19.

21. A composition comprising an antagonist compound identified by a method of claim 15 and a pharmaceutically acceptable excipient.

22. A method for treating a disease or condition associated with overexpression of functional HGST, comprising administering to a patient in need of such treatment a composition of claim 21.

23. A method of screening for a compound that specifically binds to the polypeptide of claim 1, said method comprising the steps of: a) combining the polypeptide of claim 1 with at least one test compound under suitable conditions, and b) detecting binding of the polypeptide of claim 1 to the test compound, thereby identifying a compound that specifically binds to the polypeptide of claim 1.

24. A method of screening for a compound that modulates the activity of the polypeptide of claim 1, said method comprising: a) combining the polypeptide of claim 1 with at least one test compound under conditions permissive for the activity of the polypeptide of claim 1, b) assessing the activity of the polypeptide of claim 1 in the presence of the test compound, and c) comparing the activity of the polypeptide of claim 1 in the presence of the test compound with the activity of the polypeptide of claim 1 in the absence of the test compound, wherein a change in the activity of the polypeptide of claim 1 in the presence of the test compound is indicative of a compound that modulates the activity of the polypeptide of claim

Description

[0001] This application is a divisional application of U.S. application Ser. No. 09/309,320, filed May 11, [illegible] of U.S. application Ser. No. 09/096,571, filed Jun. 12, 1998, issued Nov. 2,